

Response to Amendment

This Action is responsive to Applicant's amendment filed on November 28, 2008.

Claim 15-32 are pending.

To expedite the process of examination Examiner requests that all future correspondences in regard to overcoming prior art rejections or other issues (e.g. amendments, 35 U.S.C. 112, objections and the like) set forth by the Examiner that Applicants provide and link to the most specific page and line numbers of the disclosure where the best support is found (see 35 U.S.C. 132).

Claim Objections

Claims 15-32 are objected to because of the following informalities:

The phrase "hierarchical node" is objected to and should be replaced with a node pertaining to a particular level to reflect similar terminology used throughout the claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 15-32 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth whether the invention accomplishes a practical application and whether it generates a useful, concrete and tangible result.

The guidelines explain that a practical application of a 35 U.S.C. 101 judicial exception is claimed if the claimed invention physically transforms an article or physical object to a different

state or thing, or if the claimed invention otherwise produces a useful, concrete, and tangible result.

In the present case, independent claims 15, 21 and 27 do not involve transformation of article or physical object to a different state or thing, they merely recite processing data items. Further, independent claims 15, 21 and 27 do not produce a useful, concrete, and tangible result, but merely attempt to merge data of multiple streams to a single output, however this feature is not clearly claimed hence the claim is nonfunctional. State Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02.

Claims 15, 21 and 27 taken as a whole are directed to a mere method and program listing, i.e., to only its description or expression, is descriptive material per se, do not comprise a practical application as explained above hence are nonstatutory.

Since the claimed invention, as a whole, does not comprise a practical application as explained above, claims 16-20, 22-26 and 28-32 which depend from claims 15, 21 and 27 respectively, are deemed to be directed to non-statutory subject matter.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 15, 21 and 27, claim 15 being exemplary, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably

convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 15 being exemplary, the subject matter of 1) “promoting said data items of said leaf nodes through said tree from a leaf node to said root node” and 2) “promoting one of said data items of one said nodes to a node in a next level”, were not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

Claims 16-20, 22-26, 28-32 depend from claims 15, 21 and 27, respectively and are therefore rejected on the same basis.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 15-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 15, 21 and 27, claim 15 being exemplary, the segment “promoting one of said data items of one said nodes to a node in a next level... status identifier” is indefinite. It is not clear how a status identifier is used to promote nodes from one level to another level. It is further not clear which node is promoted to what. Second, the segment “comparing said status identifier of two of said nodes” is indefinite. It is not clear what status and which two nodes are compared. The phrase, “said first node” is indefinite. It is not clear what node is being referred

to. The segment “a next time” is indefinite. It is not clear what is claimed. The phrase “a next level” is indefinite. While level is well understood in the art of node trees, it is not clear what level is the next level.

Claims 16-20, 22-26, 28-32 depend from claims 15, 21 and 27, respectively and are therefore rejected on the same basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 15-32 are rejected under 35 U.S.C. 102(a) as best as Examiner is able to ascertain as being anticipated by Applicant's Admitted Prior Art (AAPA), Applicant's Disclosure.

Regarding claims 15, 21 and 27, AAPA discloses a method, program and system for implementing replacement selection method: (page 1, lines 5-8 and page2, lines 11-15, AAPA)

creating a tree with a root node and leaf nodes; (fig. 5A, items 520-525 and see nodes)

processing data items; (fig. 5A)

promoting data items responsive to a data identifier value; (fig. 5A, items 520-525 and 510-515)

merging data items from input streams to a single output stream; (fig. 5A and page 1, par. 5, lines 1-11)

resolving a data item being processed from a second input stream as being a duplicate of a previously processed data item from a first input stream using a status identifier based on said assigned duplicate data item comparison and omitting a node identifier comparison; (fig. 5A, nodes and page 1, par. 6, lines 1-7, *duplicate and swap can be omitted*)

processing and promoting data items from said second input stream responsive to said assigned duplicate status identifier (page 1, par. 5, lines 8-11 and par 6, line 4); and

said single output stream comprised of said merged data items (fig. 5A and page 1, par. 5, lines 1-11, *merging*).

(Note: AAPA teaches any number of input streams represented by the letter N)

Regarding claims 16-20, 22-26 and 28-32 AAPA discloses all the subject matter claimed in the rejection above, in addition AAPA teaches each node of the selection tree comprises an identifier of one of the input streams, and a reference to a data item being processed from that one of the input streams (fig. 5A, item 500 and nodes), value numbers to signify relationships between the keys (identifiers), see (page 1, par. 6, lines 5-8) and that the method is a replacement selection method using a loser oriented selection tree (fig. 5 and page 1, paragraphs 5 and 6).

Response to Arguments

Applicant's arguments filed November 28, 2008 have been fully considered but they are not persuasive. The arguments and responses are listed below.

Applicant argues that “hierarchical node” is replaced to “next higher level in the tree structure”.

Examiner disagrees. A next level is objected to because the terms “hierarchical” and “level” are not used consistently. Examiner suggests either using hierarchical or level in the claims, but not both.

Applicant argues that the feature of single output stream formed by the merge overcomes non-statutory rejection and that the claims are supported by the specification.

Examiner disagrees. Applicants do not successfully claim deriving a single output stream from multiple streams. For example, while the concept to process multiple streams and derive a single stream is clear, the method or steps in achieving this feature are not clearly claimed. Therefore, examiner maintains that the pending claims are non-functional because as a whole they do not clearly claim the processing steps to achieve the intended goal, a single output. Further, the disclosure also lacks support for successively achieving a single stream using a tree structure.

Applicant argues that 112 rejections should be removed since examiner provided only a blanket statement.

Examiner disagrees. Applicants do not successfully claim deriving a single output stream from multiple streams. The implementation and traversal of nodes and use of identifiers is not clearly claimed and is therefore rejected as best understood and not a blanket statement as alleged. Every rejection follows with an explanation and reasoning of why the subject matter is

indefinite. In retrospect, Applicant did not provide any full explanation or specific reference to the specification for possible clarification or support of the claimed subject matter. Further, as mentioned above, the bulk of the indefiniteness is geared towards the method/steps of processing multiple streams to derive at the intended goal, a single stream.

Applicant argues that the prior art does not teach the omission of a second node identifier comparison but teaches omission using swap, hence after the key comparison.

Examiner disagrees. Examiner notes that the present claims are rejected as best understood by the Examiner. The pending claims attempt to claim a computer replacement selection method for 3 or more input data streams, or a plurality of streams. The AAPA submitted by the Applicants also teaches a computer replacement selection method by building a binary selection tree over a plurality of input streams, as seen in fig. 5 (page 1, lines 5-8 and 9-11, Instant Application). The claimed limitations include comparing status identifiers which is also done by the prior art using relationships “-1, 0 or 1” between the compared keys as described in par. 6 on page 1 of the specification. In addition, Examiner maintains that the use of omitting a comparison step in the claim is equivalent to AAPA's omitting a swap of key values for duplicate data, as rejected above.

With respect to all the pending claims 15-32, Examiner respectfully traverses Applicants assertion based on the discussion and rejection above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc R. Filipczyk whose telephone number is (571) 272-4019. The examiner can normally be reached on Mon-Fri, 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ali can be reached on 571-272-4105. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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February 26, 2009
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